

Republic of the Philippines BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO OFFICE OF THE CHIEF MINISTER SPECIAL BIDS AND AWARDS COMMITTEE MARAWI REHABILITATION PROGRAM

Bangsamoro Government Center, Governor Gutierrez Avenue, Rosary Heights VII, Cotabato City 9600

IN RE: COMPETITIVE PUBLIC BIDDING FOR THE CONSTRUCTION OF 55 - UNIT HOUSING WITH 2KW HYBRID SOLAR ENERGY FOR MARAWI IDPS WITHIN MARAWI CITY OF MARAWI REHABILITATION PROGRAM – PROJECT MANAGEMENT OFFICE (MRP-PMO)

ABC: PHP 61,982,175.00

IB NO.: MRP-112024-001

SUPPLEMENTAL BID BULLETIN NO. MRP-2024-11-001 November 20, 2024/ Jumada I 18, 1446 AH

Please be advised of the following clarifications and Modifications on the Bidding Documents:

SUBJECT	ORIGINAL			AMENDED			
1. List of							
Contractor's Key Personnel	Key Personnel	General Experience	Minimum Relevant Experience		Key Personnel	General Experience	Minimum Relevant Experience
i ersonner	1 Project Engineer	Construction	5 years		1 Project Engineer	Construction	5 years
	1 Safety Officer	Construction Safety and Health	3 years		1 Safety Officer	Construction Safety and Health	3 years
	1 Materials Engineer	Quality Assurance	3 years		1 Materials Engineer	Quality Assurance	3 years
	1 Construction Foreman	Supervision	5 years		1 Construction Foreman	Supervision	5 years
	1 Health Personnel	Basic Healthcare in Construction	1 year		1 Health Personnel	Basic Healthcare in Construction	1 year
	1 Electrical Engineer	Electrical Installation	2 years		1 Electrical Engineer	Electrical Installation	2 years
					<u>7 Skilled</u> Laborer	<u>Construction</u>	<u>1 year</u>

					<u>(We</u> <u>Ma</u> <u>Carp</u> Pai <u>Tile</u> <u>Elect</u> <u>Plu</u>	elder, ison, entry, nter, Setter, rician, nber)		
2. Lis Co Ma	st of ontractors aior	Equipment	Minimum Specifications	Minimum Number of Units	Equip	ment	Minimum Specifications	Minimum Number of Units
Eq	luipment	Dump Truck	12 cu. yd.	2	Dump	Гruck	12 cu. yd.	2
Un	nits	Payloader	1.50 cu. m./1.95 cu. yd.	1	Payload	der	1.50 cu. m./1.95 cu. yd.	1
		Bulldozer	D6H Series II PSDS/DD Tools	1	Bulldoz	zer	D6H Series II PSDS/DD Tools	1
		Backhoe	0.80 cu. M.	1	Backho	e	0.80 cu. M.	1
		One Bagger Mixer	4-6 cu.ft./min	1	One Mixer	Bagger	4-6 cu.ft./min	<u>4</u>
		Bar Cutter	25 mm max., single phase	1	Bar Cut	ter	25 mm max., single phase	2
		Bar Bender	25 mm max., three (3) phase	1	Bar Ber	nder	25 mm max., three (3) phase or single phase	2
		Truck Mounted	20-25mt	1	Truck M Crane	Mounted	20-25mt	1
		Welding	500 amp	2	Machin	g ie	500 amp	<u>4</u>
		Cutting Outfit	-	1	Cutting	Outfit	-	1
		Boom Truck	2-5 mt	1	Boom 7	ſruck	2-5 mt	1
		Cargo Truck/Delivery Truck	9-10 mt	1	Cargo Truck/ Truck	Delivery	9-10 mt	1
		Chainsaw	-	1	Chainsa	aw	-	1
					<u>Plate</u> <u>Compa</u>	ctor	<u>5hp</u>	1
3. See Sp	ction VI. ecifications	S	ee Annex A			5	See Annex B	
4. See Bil Qu	ction VIII. ll of antities			See An	nex C			

This Supplemental/Bid Bulletin is issued to modify or amend the corresponding items in the Bidding Documents.

For guidance and information of all concerned.

Signed NARCISA D. MACOG Chairperson, Special Bids and Awards Committee

Annex "A"

Section VI. Specifications

INTRODUCTION

The Drawings and Specifications are complementary to each other. Drawings are graphic means of showing work to be done. They are particularly suited to showing where materials are located. Thus, drawings exist essentially to show dimension, location and placement. Not all works, however, can be presented in the drawings. Generalized works are usually statement form and hence, the contractor is required to read the specifications carefully.

Specifications, on the other hand, are used to describe the materials, construction techniques, samples, shop drawings, guarantees and other contract requirements. Together, the drawings and the specifications are used to inform the contractor. In cases where the specified brand carries with it the manufacturer's specifications, the manufacturer's specifications shall hold precedence over these specifications.

The Specifications are of the abbreviated type and include incomplete sentences. The selection of the sentence depends on the underlying principles of Specifications:

- 1. That the Technical Specifications are only one part of the Contract Documents.
- 2. That the Contract is between the Procuring Entity and the General Contractor and
- 3. That the General Contractor is the only party responsible for completing the work in accordance with the Contract Documents.

Therefore:

- 1. Only the General Contractor is referred to in the Specifications so as not to violate the intent of the contract and so as not to undermine the proper chain of command.
- 2. Any reference to Specialty Trade Contractors in the technical Specifications is made only in so far as selection of Specialty Trade Contractors is made through bidding. Once the Specialty Trade Contractors are selected and assigned to the General Contractor, the General Contractor assumes all the responsibilities for the execution of the whole project in accordance with the Contract Documents. Therefore, in the contract between the Owner and the General Contractor, the Specialty Trade Contractor is not referred to. In all contract Documents, the word "Contractor" means the General Contractor.
- 4. The omission of the phrase "The Contractor shall" is intentional because the whole Specifications is directed to the Contractor. Omitted words or phrases shall be supplied by inference in the same manner as they are when a "note" occurs on the drawings.
- 5. Where "as shown", "as indicated", "as detailed" or words of similar import are used, it shall be understood that reference to the drawings accompanying the Specifications is made unless otherwise stated.
- 6. Where "as directed", "as required", "as permitted", "as authorized", "as approved, accepted" or words of similar import as used, it shall be understood that the direction,

requirements, permission, authorization, approval or acceptance of the Architect is intended unless otherwise stated.

- 7. As used herein, "provided" shall be understood to mean "provided complete in place," that is, "furnished and installed".
- 8. Most sentences are in the imperative mood. This style is especially suited for instructions covering the installation of products and equipment.

CLARIFICATIONS

All reference to any brand, material, equipment, or systems in the Specifications, plans, and bid documents is indicative of the type and quality of what is required. However, any equal material, equipment, or system can be used.

The list of items of work provided in the scope of works does not in any way limit the responsibility of the Contractor to perform all other works necessary for the completion of the

A. GENERAL CONDITIONS DESCRIPTION OF THE PROJECT

Complete all works for the Construction of 55 - Unit Housing with 2kW Hybrid Solar Energy for Marawi IDPs within Marawi City of Marawi Rehabilitation Program – Project Management Office (MRP-PMO), including the supply of all materials, equipment, and systems, as well as the performance of all necessary labor and processes, in accordance with the plans, specifications, the Bidding Documents, the Terms of References, and other related contract documents.

The contractor is not limited to the scope of works listed. They should verify all plans and actual conditions for the necessity of work. If the actual situation calls for demolition, removal, and relocation he shall include such and all concomitant works to finish as part of the scope of work.

Any discrepancies found between the drawings and specifications and the site conditions or any errors or omissions in the drawings or specifications should be clarified with the Engineer from the Procuring entity.

Should the contractor fail to verify or clarify discrepancies, errors, conflicts or omissions in the drawings and specifications, it shall be deemed that the contractor has included in the preparation of his bid the necessary works, materials, or items needed to satisfy the general scope of works.

B. SCOPE OF WORKS:

Enumerated below are some of the works expected from the contractor. Therefore, the scope is not limited to what has only been written below, some works are implied and expected. The objective of the project must be met by the implementing contractor before the project may be turned over to the MRP-PMO and ultimately to OCM-BARMM.

1. Provision of field office for the Engineer (Rental basis).

The contractor shall provide a field office for the Engineer as reflected on the Program of Works and the Bill of Quantities, in order to provide a centralized hub for project coordination, ensure effective communication and collaboration, offer a secure and organized workspace, facilitate real-time monitoring supervision and enhance client and stakeholder engagement.

2. Bunk House, Storage, Workmen Accommodation for Contractor

The contractor shall provide temporary facilities at the site which includes, **Bunk House** that will shelter the workers ensuring their comfort and well-being, **Storage** that will securely store the construction materials and equipment and **Workmen Accommodation** that will provide amenities for workers' comfort and hygiene.

3. Permits and Clearances

The contractor shall be responsible of preparing and providing any documents required in securing any necessary permits and clearances from a relevant authority before and during the project implementation.

4. Installation of Project Billboard at Project Site

The contractor shall provide a Project billboard as shown in the Detailed Engineering Designs. This aims to enhance transparency and accountability, encourages community involvement, facilitates smooth project execution and demonstrates government commitment to public information and participation.

5. Construction Health and Safety Program

To ensure a safe working environment for employees, subcontractors and visitors, the contractor shall observe a Construction Health and Safety Measures which includes but not limited to: deploying safety officer and a health personnel's that is constantly present at the site, provision of Personal Protective Equipment to construction work personnel's and provisions of suitable signages and barricades for a certain construction works.

6. Mobilization/Demobilization

The contractor shall prepare a logistics of contractor's equipment, setup of Temporary Facilities within the site, set up of necessary water and power lines required for the project set up of any safety measure equipment or temporary structures (such as tarps, signs, etc.), coordinate with stakeholders thru notifying neighbors, authorities and other interested parties, deploy materials and manpower on-site and conduct safety orientations by inducting workers on site safety procedures.

The contractor shall disassemble and transport equipment off-site, relocate or release staff and subcontractors, restore the site to its original condition, dismantle site facilities and amenities, manage waste and surplus materials, complete punch list and document site conditions, transfer ownership and responsibility and document best practices and areas for improvement.

7. Earthworks

Earthworks shall include but not limited to the following:

- *a. Clearing and grabbing.* All surface objects and all trees, stumps, roots and other protruding obstructions, not designated to remain, shallbe cleared and/or grubbed, including mowing as required,
- *b. Removal of trees.* All trees at the project site that obstruct the construction shall be removed, the contractor is responsible for any clearance or permit needed from the relevant authority for the removal of trees,
- *c. Structural Excavation.* Structural excavation includes but not limited to excavation of structural tie beam, structural footing for column and wall and excavation for septic tank.

d. Embankment from a common borrow by equipment

Embankment from a common borrow by equipment shall include but not limited to structural footing for wall and column, tie beam and floor on slab or as specified in the plan.

8. Concrete Works

Concreting works shall include but not limited to: Structural footing for column and wall, column, tie beam, roof beam, slab on floor, slab canopy, canopy, septic vault, and other concreting works specified in the plan.

9. Reinforcing Steel works for Reinforced Concrete

Reinforcing steelworks shall include but not limited to: fabrication of steel reinforcement for column and wall footing, column, tie beam, roof beam, slab on floor, slab canopy, canopy, septic vault, wall and other reinforcing steelworks specified in the plan.

10. Form works and False works

Form works and false works shall include but not limited to: fabrication of form works for column, roof beam, canopy, slab canopy, septic vault and other construction activities that requires form works as specified in plan.

11. Plumbing and Sanitary works

Works shall include but not limited to: installation of water service pipes from the main pipe and the distribution pipes, sanitary pipes and fittings. This also includes the installation of all plumbing fixtures.

12. Installation of Hardiflex Interior Wall on Metal Frame

This works includes the installation of double wall hardiflex on metal frame as specified in the plan.

13. Ceiling Works

This works includes framing, installation of hardiflex and finishing.

14. Masonry Works

Masonry works includes the Piling of CHB as indicated in plan

15. Plastering

The contractor shall plaster both side of all piled CHB.

16. Tiles Installation

This works shall include the installation of glazed tiles in all interior floor area.

17. Structural Steel Works

Works shall include the fabrication and installation of steel trusses, steel purlins and other steel works as specified in the plan.

18. Roofing Works

Works shall include the installation of pre-painted metal sheet, gutters and fascia board.

19. Painting Works

For Masonry painting, works shall include the preparation of the area to be painted, application of skim coat, first coat for primer and final coat for the final color. Both side of all walls and other parts of the structure shall be painted. For the final color, the contractor shall submit to end user an approval form for the determination of final color.

For metal painting, works shall include the application of anti-rust coat with red as final color for steel truss, steel purlins and other exposed metals.

Works also includes the special paint of okir and wood finish as specified in the plan.

20. Installation of doors and windows

Works shall include the installation of doors and windows as specified in the plan.

21. Solar Power Energy Hybrid

Works shall include but not limited to the installation, testing and commissioning of 2 kW Package Hybrid type Solar Energy, with Panel Board, batteries and Inverter and all

required supports and accessories.in accordance to electrical plans, specification and standard.

22. Electrical Works

Work shall include but not limited to the installation of conduits, junction boxes, receptacles, panel board, lighting fixtures, outlets and wiring in accordance to the plan, specifications and standard.

All electrical works must undergo inspection, testing and commissioning.

C. OTHERS

- The Contractor must have a Project Engineer who will supervise the project onsite. The Contractor shall inform MRP-PMO in case of replacement/changes of personnel assigned at the project site. The replacement must have relevant qualifications and abilities equal to or better than those of the personnel as evidenced by his/her training certification to be submitted to MRP-PMO.
- Demolitions and repairs due to the Contractor's fault shall be done by the Contractor without extra compensation to the Owner.
- Prepare a monthly progress report which shall include an overall progress chart based on actual physical accomplishment of construction work and a progress chart based on actual value of accomplished construction work, among others.
- As soon as the project is satisfactorily inspected and it conforms to the plans and specifications, the contractor shall submit to the procuring entity a written notice that said project is completed and is subject to the latter's approval.
- Five copies of As-Built Plan must be submitted not later than 7 days after project completion.

D. SPECIFICATIONS

All drawings, small scale, and detail drawings are intended to collaborate with the specifications and to form part thereof, where figures are given, they are to be followed in preference to measurement by scale. Anything shown in the drawingsand not mentioned in the specifications or vice-versa or anything not expressly outlined in either, but which is reasonably implied shall be furnished and installed as thought specifically shown in mentioned both.

1. STAKING OUT THE BUILDING LINE

The building line for the proposed Housing Units shall be staked out and all lines and grades shown on the plan shall be established before any excavations start. Batter boards and reference marks shall be erected at such places where they will not be disturbed during the excavation works.

2. EXCAVATION

All excavations shall be made to grade indicated on the drawings. Where the building site is covered with any kind of fill, the excavation for footings should be made deeper until the stratum for safe bearing capacity of soil is reached.

Whenever water is encountered during the excavation process, it shall be removed by bailing or pumping, care being taken that the surrounding soil particles are not disturbed or removed.

3. BACKFILLS

After concrete for foundation is hard enough to withstand pressure resulting from fills, the materials removed from excavation can be used for backfill around them.

Backfills and fills shall be placed in layers not exceeding 150mm in thickness, and each layer shall be thoroughly compacted by wetting, tamping or rolling.

4. CONCRETE WORKS

All concrete shall be mixed thoroughly until there is a uniform distribution of the cement and aggregates, and should be deposited as nearly as possible to its final position, care being taken to avoid segregation of the aggregates.

Water to be used for mixing concrete shall be clean and free from injurious amount of oil, acids, alkalis, salts and other organic materials.

5. PROPORTIONING OF CONCRETE

All concrete works shall be done in accordance with the standard specification for plain and reinforced concrete as adopted by the government. Cement to be used shall be Portland or Pozzolan cements whichever is more readily available in the locality.

The following proportions of concrete mixtures shall be used for the various parts of the building:

Column, Concrete Wall and Footingsclass A (1:2:4) Reinforced Concrete Beams and Slabsclass A (1:2:4) Concrete Floor Slab on Fillclass A (1:2:4)

Class A concrete shall be a mixture of 1 part of cement, 2 parts of fine aggregates and 4 parts of coarse aggregates by volume, plus enough clean water to make mixture into a pliable paste.

Class B concrete shall be a mixture of 1 part of cement, 2-1/2 part of fine aggregates, 5 parts of coarse aggregates by volume, plus enough clean water to make the mixture into a pliable paste.

Class C concrete shall be a mixture of 1 part of cement, 3 parts of fine aggregates, 6 parts of coarse aggregates by volume, plus enough clean water to make the mixture into a pliable paste.

The fine aggregates for concrete shall consist of natural sand or of inert materials with similar characteristics having clean, hard and durable grains, free from organic matter or loam.

The coarse aggregates shall consist of gravel, crushed gravel or rocks, or a combination of gravel and rocks, and shall consist of hard, tough, durable, clean and uncoated particles. The sizes of coarse aggregates to be used in the various part of the work shall be 3/4" or as required.

The mixture of cement plaster for concrete hollow block walls shall be 1 part of cement and 3 parts of sand.

6. STEEL REINFORCEMENTS

All steel reinforcement bars to be used in this construction shall consist of round deformed bars with lugs or projections on their sides to provide a greater bonding between concrete and the steel.

All steel reinforcing bars shall be accurately placed and secured against displacement by tying them together at each bar intersection with gauge no. 16 G.I. tie wire.

The steel reinforcement bars indicated on footings, column, beams and other concrete members should all conform to the number, size, and spacing as indicated on the drawings or schedule of steel reinforcements.

No metal reinforcements shall be installed in place unless it is free from rust, scales or other coating, which will destroy or reduce the bond with concrete.

7. FORMS FOR CONCRETE WORKS

All forms for concrete works shall be properly braced or tied together so as to maintain the correct position and shapes of the concrete members. Forms shall be constructed sufficiently tight to prevent bulging and seepage of water.

Forms shall not be removed until the concrete has attained sufficient strength to support its own weight and any loads that may be placed on it. Side forms of beams and girders may be removed earlier than the bottom forms but additional posts or shoring must be placed under the beam or girder until they have attained their strength.

Forms are pre-fabricated and provided to assemble in site.

8. CONCRETE SLAB ON FILL

Concrete slab on-fill shall be poured on gravel bed of not less than 100mm thick and properly compacted.

9. FLOOR FINISHES

Entrance Porch......Plain Cement smooth finished Living Room......40cmX40cm Unglazed Tiles and Trim or equivalent Dining Room......40cmX40cm Unglazed Tiles and Trim or equivalent

Kitchen	40cmX40cm Unglazed Tiles and Trim or
equivalent	C
Bedrooms	40cmX40cm Unglazed Tiles and Trim or
equivalent	
Toilet and Bathroom	40cmX40cm Unglazed Tiles and Trim or
equivalent	

All tiles shall be free from laminations, serrated edges, chipped off corners and other defect, which would adversely affect their appearance and strength.

Before the tiles and moldings are laid in place, they shall be soaked in water. Use Tile Adhesive in setting tiles and moldings.

10. WALL FINISHES

Interior Walls..... Cement Plaster Smooth Finished, skim coat Finished, Painted Exterior Walls..... Cement Plastered Smooth Finished, Skim coat finished, Painted

11. CEILING

All interior and exterior ceiling shall be 3.5mm HARDIEFLEX ceiling boards on METAL FURRING ceiling frame spaced at 0.60m O.C both ways. Provide necessary air vents at eaves ceiling properly screened with insect screen.

12. LUMBER AND WOOD WORKS

All lumber to be used in this project shall be well seasoned thoroughly dry and free from loose or unsound knots, shakes or other imperfections impairing their strength, quality and appearance.

13. DOORS AND WINDOWS

All doors and windows shall conform to the SCHEDULE OF DOORS AND WINDOWS found in the plan, any changes of the design and the kind of materials to be used shall be approved by the End User and the Architect.

14. STEEL ROOF FRAMING

All steel materials used in the construction shall be in accordance with AISC Specification for Design, Fabrication and Erection of structural steel for buildings.

A. Steel Trusses and Rafters:Refer to the plan

B. Purlins Use: Refer to the plan

C. Fascia Framing: Refer to the plan.

D. Sag Rod: Use: 8mm dia. Deformed bars

All steel work after complete fabrication and erection shall be Painted with 2-Coats Epoxy Red Oxide Primer paint.

15. ROOFING

The roof shall be covered with 0.4mm thick pre-painted metal tile roofing sheet and shall be secured to the 2" x 3" C-Purlins with 2" Metal Tekscrew.

Ridge roll, hip rolls and valleys to be used shall be those compatible with the prepainted metal tile roofing sheets. They shall lap the roofing sheets at least 250mm. The ridge roll, hip rolls and valleys shall be riveted to the roofing sheets in addition to the tekscrew and rivets engaging G.I. Straps in securing the roofing sheets to the purlins.

All roofing sheets adjacent to concrete hollow blocks and masonry walls such as at property line firewalls, shall be provided with gauge # 26 G.I. Flashing to extend up to the top and over to the other side of the wall. All rivets shall be placed at the top of the corrugation of the roofing sheets to prevent leaks.

16. ELECTRICAL WORKS

The electrical installation shall be done in accordance with the approved plans and under the direct supervision and control of a duty licensed Registered Electrical Engineer or Master Electrician.

All electrical works and materials shall conform to the provision of the latest edition of the Philippine Electrical Code.

The electrical wiring shall be installed thru MOLDFLEX coil cable PVC electrical conduit, fittings and appurtenances.

Electrical wires for light and power shall not be less than 3.5mm2 (No. 12).

Automatic Circuit Breakers shall rated 220 V, 2 Pole, 60 Hz.

All spare circuits shall be provided with an empty PVC pipe, size 19mm diameter that should extend at least 300mm above the ceiling line. The grounding wires shall be identified and all wires shall be color coded for easy identification.

The panel board shall provide with circuit directory.

17. PLUMBING

All plumbing works in this project shall be done in accordance with the approved plans under the direct supervision of a duly licensed Sanitary Engineer or Master Plumber.

The Plumbing installation shall conform to the provision of the latest edition of the National Plumbing Code of the Philippines and the rules and regulations enforced in the locality.

All sanitary pipelines, storm drain, vent pipes down spout shall be Polyvinyl Chloride (PVC) Series 1000.

For the in-house water supply piping installations, Water PVC pipes and brass fittings shall be used. Where a sanitary sewer system or sewage disposal is not operation in the locality, a standard septic vault shall be constructed as shown in the drawing.

18. PAINTING

Before any painting is done, all surfaces to be painted shall be cleaned, smoothed and freed from dust, dirt, grease, mortar, rust and other foreign substances and all parts where paint remover has been used shall be washed off with paint thinner or lacquer thinner. All paints shall be spread evenly and carefully using paintbrush, roller, or spray.

No painting shall be done on outside work in extremely cold, frosty, foggy or damp weather. Painting to be done in cold weather should be performed when the temperature is above 50 deg. F.

The special paint for the traditional okir design as specified in the plan shall be done by an artist.

Annex "B"

Section VI. Specifications

INTRODUCTION

The Drawings and Specifications are complementary to each other. Drawings are graphic means of showing work to be done. They are particularly suited to showing where materials are located. Thus, drawings exist essentially to show dimension, location and placement. Not all works, however, can be presented in the drawings. Generalized works are usually statement form and hence, the contractor is required to read the specifications carefully.

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- *f. Removal of trees.* All trees at the project site that obstruct the construction shall be removed, the contractor is responsible for any clearance or permit needed from the relevant authority for the removal of trees,
- *g. Structural Excavation.* Structural excavation includes but not limited to excavation of structural tie beam, structural footing for column and wall and excavation for septic tank.

h. Embankment from a common borrow by equipment

Embankment from a common borrow by equipment shall include but not limited to structural footing for wall and column, tie beam and floor on slab or as specified in the plan.

30. Concrete Works

Concreting works shall include but not limited to: Structural footing for column and wall, column, tie beam, roof beam, slab on floor, slab canopy, canopy, septic vault, and other concreting works specified in the plan.

31. Reinforcing Steel works for Reinforced Concrete

Reinforcing steelworks shall include but not limited to: fabrication of steel reinforcement for column and wall footing, column, tie beam, roof beam, slab on floor, slab canopy, canopy, septic vault, wall and other reinforcing steelworks specified in the plan.

32. Form works and False works

Form works and false works shall include but not limited to: fabrication of form works for column, roof beam, canopy, slab canopy, septic vault and other construction activities that requires form works as specified in plan.

33. Plumbing and Sanitary works

Works shall include but not limited to: installation of water service pipes from the main pipe and the distribution pipes, sanitary pipes and fittings. This also includes the installation of all plumbing fixtures.

34. Installation of Hardiflex Interior Wall on Metal Frame

This works includes the installation of double wall hardiflex on metal frame as specified in the plan.

35. Ceiling Works

This works includes framing, installation of hardiflex and finishing.

36. Masonry Works

Masonry works includes the Piling of CHB as indicated in plan

37. Plastering

The contractor shall plaster both side of all piled CHB.

38. Tiles Installation

This works shall include the installation of glazed tiles in all interior floor area.

39. Structural Steel Works

Works shall include the fabrication and installation of steel trusses, steel purlins and other steel works as specified in the plan.

40. Roofing Works

Works shall include the installation of pre-painted metal sheet, gutters and fascia board.

41. Painting Works

For Masonry painting, works shall include the preparation of the area to be painted, application of skim coat, first coat for primer and final coat for the final color. Both side of all walls and other parts of the structure shall be painted. For the final color, the contractor shall submit to end user an approval form for the determination of final color.

For metal painting, works shall include the application of anti-rust coat with red as final color for steel truss, steel purlins and other exposed metals.

Works also includes the special paint of okir and wood finish as specified in the plan.

42. Installation of doors and windows

Works shall include the installation of doors and windows as specified in the plan.

43. Solar Power Energy Hybrid

Works shall include but not limited to the installation, testing and commissioning of 2 kW Package Hybrid type Solar Energy, with Panel Board, batteries and Inverter and all

required supports and accessories.in accordance to electrical plans, specification and standard.

44. Electrical Works

Work shall include but not limited to the installation of conduits, junction boxes, receptacles, panel board, lighting fixtures, outlets and wiring in accordance to the plan, specifications and standard.

All electrical works must undergo inspection, testing and commissioning.

G. OTHERS

- The Contractor must have a Project Engineer who will supervise the project onsite. The Contractor shall inform MRP-PMO in case of replacement/changes of personnel assigned at the project site. The replacement must have relevant qualifications and abilities equal to or better than those of the personnel as evidenced by his/her training certification to be submitted to MRP-PMO.
- Demolitions and repairs due to the Contractor's fault shall be done by the Contractor without extra compensation to the Owner.
- Prepare a monthly progress report which shall include an overall progress chart based on actual physical accomplishment of construction work and a progress chart based on actual value of accomplished construction work, among others.
- As soon as the project is satisfactorily inspected and it conforms to the plans and specifications, the contractor shall submit to the procuring entity a written notice that said project is completed and is subject to the latter's approval.
- Five copies of As-Built Plan must be submitted not later than 7 days after project completion.

H. SPECIFICATIONS

All drawings, small scale, and detail drawings are intended to collaborate with the specifications and to form part thereof, where figures are given, they are to be followed in preference to measurement by scale. Anything shown in the drawingsand not mentioned in the specifications or vice-versa or anything not expressly outlined in either, but which is reasonably implied shall be furnished and installed as thought specifically shown in mentioned both.

19. STAKING OUT THE BUILDING LINE

The building line for the proposed Housing Units shall be staked out and all lines and grades shown on the plan shall be established before any excavations start. Batter boards and reference marks shall be erected at such places where they will not be disturbed during the excavation works.

20. EXCAVATION

All excavations shall be made to grade indicated on the drawings. Where the building site is covered with any kind of fill, the excavation for footings should be made deeper until the stratum for safe bearing capacity of soil is reached.

Whenever water is encountered during the excavation process, it shall be removed by bailing or pumping, care being taken that the surrounding soil particles are not disturbed or removed.

21. BACKFILLS

After concrete for foundation is hard enough to withstand pressure resulting from fills, the materials removed from excavation can be used for backfill around them.

Backfills and fills shall be placed in layers not exceeding 150mm in thickness, and each layer shall be thoroughly compacted by wetting, tamping or rolling.

22. CONCRETE WORKS

All concrete shall be mixed thoroughly until there is a uniform distribution of the cement and aggregates, and should be deposited as nearly as possible to its final position, care being taken to avoid segregation of the aggregates.

Water to be used for mixing concrete shall be clean and free from injurious amount of oil, acids, alkalis, salts and other organic materials.

23. PROPORTIONING OF CONCRETE

All concrete works shall be done in accordance with the standard specification for plain and reinforced concrete as adopted by the government. Cement to be used shall be Portland or Pozzolan cements whichever is more readily available in the locality.

The following proportions of concrete mixtures shall be used for the various parts of the building:

Column, Concrete Wall and Footingsclass A (1:2:4) Reinforced Concrete Beams and Slabsclass A (1:2:4) Concrete Floor Slab on Fillclass A (1:2:4)

Class A concrete shall be a mixture of 1 part of cement, 2 parts of fine aggregates and 4 parts of coarse aggregates by volume, plus enough clean water to make mixture into a pliable paste.

Class B concrete shall be a mixture of 1 part of cement, 2-1/2 part of fine aggregates, 5 parts of coarse aggregates by volume, plus enough clean water to make the mixture into a pliable paste.

Class C concrete shall be a mixture of 1 part of cement, 3 parts of fine aggregates, 6 parts of coarse aggregates by volume, plus enough clean water to make the mixture into a pliable paste.

The fine aggregates for concrete shall consist of natural sand or of inert materials with similar characteristics having clean, hard and durable grains, free from organic matter or loam.

The coarse aggregates shall consist of gravel, crushed gravel or rocks, or a combination of gravel and rocks, and shall consist of hard, tough, durable, clean and uncoated particles. The sizes of coarse aggregates to be used in the various part of the work shall be 3/4" or as required.

The mixture of cement plaster for concrete hollow block walls shall be 1 part of cement and 3 parts of sand.

24. STEEL REINFORCEMENTS

All steel reinforcement bars to be used in this construction shall consist of round deformed bars with lugs or projections on their sides to provide a greater bonding between concrete and the steel.

All steel reinforcing bars shall be accurately placed and secured against displacement by tying them together at each bar intersection with gauge no. 16 G.I. tie wire.

The steel reinforcement bars indicated on footings, column, beams and other concrete members should all conform to the number, size, and spacing as indicated on the drawings or schedule of steel reinforcements.

No metal reinforcements shall be installed in place unless it is free from rust, scales or other coating, which will destroy or reduce the bond with concrete.

25. FORMS FOR CONCRETE WORKS

All forms for concrete works shall be properly braced or tied together so as to maintain the correct position and shapes of the concrete members. Forms shall be constructed sufficiently tight to prevent bulging and seepage of water.

Forms shall not be removed until the concrete has attained sufficient strength to support its own weight and any loads that may be placed on it. Side forms of beams and girders may be removed earlier than the bottom forms but additional posts or shoring must be placed under the beam or girder until they have attained their strength.

Forms are pre-fabricated and provided to assemble in site.

26. CONCRETE SLAB ON FILL

Concrete slab on-fill shall be poured on gravel bed of not less than 100mm thick and properly compacted.

27. FLOOR FINISHES

Entrance Porch......Plain Cement smooth finished Living Room......40cmX40cm Unglazed Tiles and Trim or equivalent Dining Room......40cmX40cm Unglazed Tiles and Trim or equivalent

Kitchen	40cmX40cm Unglazed Tiles and Trim or
equivalent	6
Bedrooms	40cmX40cm Unglazed Tiles and Trim or
equivalent	
Toilet and Bathroom	40cmX40cm Unglazed Tiles and Trim or
equivalent	

All tiles shall be free from laminations, serrated edges, chipped off corners and other defect, which would adversely affect their appearance and strength.

Before the tiles and moldings are laid in place, they shall be soaked in water. Use Tile Adhesive in setting tiles and moldings.

28. WALL FINISHES

Interior Walls..... Cement Plaster Smooth Finished, skim coat Finished, Painted Exterior Walls..... Cement Plastered Smooth Finished, Skim coat finished, Painted

29. CEILING

All interior and exterior ceiling shall be 3.5mm HARDIEFLEX ceiling boards on METAL FURRING ceiling frame spaced at 0.60m O.C both ways. Provide necessary air vents at eaves ceiling properly screened with insect screen.

30. LUMBER AND WOOD WORKS

All lumber to be used in this project shall be well seasoned thoroughly dry and free from loose or unsound knots, shakes or other imperfections impairing their strength, quality and appearance.

31. DOORS AND WINDOWS

All doors and windows shall conform to the SCHEDULE OF DOORS AND WINDOWS found in the plan, any changes of the design and the kind of materials to be used shall be approved by the End User and the Architect.

32. STEEL ROOF FRAMING

All steel materials used in the construction shall be in accordance with AISC Specification for Design, Fabrication and Erection of structural steel for buildings.

A. Steel Trusses and Rafters:Refer to the plan

B. Purlins Use: Refer to the plan

C. Fascia Framing: Refer to the plan.

D. Sag Rod: Use: 8mm dia. Deformed bars

All steel work after complete fabrication and erection shall be Painted with 2-Coats Epoxy Red Oxide Primer paint.

33. ROOFING

The roof shall be covered with 0.4mm thick pre-painted metal tile roofing sheet and shall be secured to the 2" x 3" C-Purlins with 2" Metal Tekscrew.

Ridge roll, hip rolls and valleys to be used shall be those compatible with the prepainted metal tile roofing sheets. They shall lap the roofing sheets at least 250mm. The ridge roll, hip rolls and valleys shall be riveted to the roofing sheets in addition to the tekscrew and rivets engaging G.I. Straps in securing the roofing sheets to the purlins.

All roofing sheets adjacent to concrete hollow blocks and masonry walls such as at property line firewalls, shall be provided with gauge # 26 G.I. Flashing to extend up to the top and over to the other side of the wall. All rivets shall be placed at the top of the corrugation of the roofing sheets to prevent leaks.

34. ELECTRICAL WORKS

The electrical installation shall be done in accordance with the approved plans and under the direct supervision and control of a duty licensed Registered Electrical Engineer or Master Electrician.

All electrical works and materials shall conform to the provision of the latest edition of the Philippine Electrical Code.

The electrical wiring shall be installed thru MOLDFLEX coil cable PVC electrical conduit, fittings and appurtenances.

Electrical wires for light and power shall not be less than 3.5mm2 (No. 12).

Automatic Circuit Breakers shall rated 220 V, 2 Pole, 60 Hz.

All spare circuits shall be provided with an empty PVC pipe, size 19mm diameter that should extend at least 300mm above the ceiling line. The grounding wires shall be identified and all wires shall be color coded for easy identification.

The panel board shall provide with circuit directory.

35. PLUMBING

All plumbing works in this project shall be done in accordance with the approved plans under the direct supervision of a duly licensed Sanitary Engineer or Master Plumber.

The Plumbing installation shall conform to the provision of the latest edition of the National Plumbing Code of the Philippines and the rules and regulations enforced in the locality.

All sanitary pipelines, storm drain, vent pipes down spout shall be Polyvinyl Chloride (PVC) Series 1000.

For the in-house water supply piping installations, Water PVC pipes and brass fittings shall be used. Where a sanitary sewer system or sewage disposal is not operation in the locality, a standard septic vault shall be constructed as shown in the drawing.

36. PAINTING

Before any painting is done, all surfaces to be painted shall be cleaned, smoothed and freed from dust, dirt, grease, mortar, rust and other foreign substances and all parts where paint remover has been used shall be washed off with paint thinner or lacquer thinner. All paints shall be spread evenly and carefully using paintbrush, roller, or spray.

No painting shall be done on outside work in extremely cold, frosty, foggy or damp weather. Painting to be done in cold weather should be performed when the temperature is above 50 deg. F.

The special paint for the traditional okir design as specified in the plan shall be done by an artist.

Annex "C"

Section VIII. Bill of Quantities

Contract Name: CONSTRUCTION OF BARMM-MRP PMO 55 UNITS HOUSING WITH 2KW SOLAR HYBRID ENERGY FOR MARAWI IDPs WITHIN MARAWI CITY Location of the Contract: MARAWI CITY, LANAO DEL SUR

ITEM NO.	DESCRIPTION	UNIT	QUANTI TY	UNIT PRICE (Pesos)	AMOUNT (Pesos)
1	2	3	4	5	6
PART A.	FACILITIES FOR THE ENG	INEER	•		
A.1.1(8)	Provision of Field Office for the Engineer (Rental Basis)	mont h	6	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
PART B.	OTHER GENERAL REQUIR	EMENT	S	·	
B.1	Bunk House, Storage and Workmen's Accommodation for Contractor	l.s	1	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
В.З	Permits and Clearances	l.s	1	In Words: Pesos: In	In Words: Pesos: In

				Figures:	Figures:
				In Words: Pesos:	In Words: Pesos:
B.5	Project Billboard	each	2		
				Figures:	Figures:
				In Words:	In Words:
				Pesos:	Pesos:
	Construction Health and				
B.7 (1)	Safety Program	days	180		
				In Ei	In
				Figures:	Figures:
				In Words: Pesos:	In Words: Pesos:
B.9	Mobilization/Demobiliz	1	l.s		
				 In	
				Figures:	Figures:
PART C.	EARTHWORKS				l

100 (1)	Clearing and Grubbing	ha	0.66	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
100 (3)b	Individual Removal of Trees (small b, above 300mm dia up to 500mm dia)	10	еа	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
803(1)a	Structural Excavation (Common Soil)	m ³	720.42	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
804(1) b	Embankment from Common Borrow by Equipment	cu.m.	495	In Words: Pesos:	In Words: Pesos:

900(1)c 2	Structural Concrete for Footing and Slab on Fill, Slab Canopy and Canopy (Class A, 28 days)	cu.m.	492.8	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
900(1)	Structural Concrete for Footing, Tie Beam, Column, and Girder/Beam, Reinforced Concrete Wall (Class A, 28 days)	cu.m.	317.05	In Words: Pesos:	In Words: Pesos: In Figures:
902(1)	Reinforcing Steel of Reinforced Concrete Structure for One-Storey, Grade 40	kg	74,415	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
903(2)	Formworks and Falseworks (for one- storey building)	m²	4950	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:

1001(1 1)	Septic Vault, Solid Concrete	l.s	55	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
1002(1)	Plumbing Works	set	55	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
1002(2)	Sanitary Works	set	55	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
SPL (1)	4.5 mm Hardiflex Interior Wall on Metal Frame	m²	4631	In Words: Pesos:	In Words: Pesos:

1003(1)	4.5 mm Hardiflex Ceiling on Metal Frame	m²	4482.3 3	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
1009(1)a	Jalouplus Window (Glass)	m ²	706.2	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
1010(1)	Frames (Door Jamb and Window Jamb)	set	660	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
1010(2)b	Wooden Panel Door (with Door Knob)	m²	484.83	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:

1014	Prepainted Metal Sheets (Long Span, Ribtype, 0.40mm thk)	m²	4,708	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
1013(2)c	Fabricated Metal Roofing Accessory (Gutter)	m	2527.2 5	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
SPL (2)	Wooden Fascia Board	set	55	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
1027(1)	Unglazed Tiles and Trims	m²	2,644.9 5	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:

1027(1)	Cement Plaster Finish	m²	12,100	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
1032(1)a	Painting Works (Masonry and Hardiflex Painting)	m²	20,020	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
1032(1)c	Painting Works (Metal Painting)	m²	3,905	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
1043(1	PVC Doors and Frames	m²	82.78	In Words: Pesos: 	In Words: Pesos:

1046	100 mm CHB Non- Loading Bearing/Loading Bearing (including Reinforced Steel)	m ²	6,050	In Words: Pesos: In Figures:	In Words: Pesos:
1047(2)b	Structural Steel Roof Truss	kg	4319.3	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
1047(2)c	Structural Steel Purlins	kg	10769. 22	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
SPL (3)	Solar Power Energy Hybrid - (Supply & Install)	set	55	In Words: Pesos: 	In Words: Pesos:
				 In Figures:	 In Figures:

1101(2)	Electrical Works	set	55	In Words: Pesos: In Figures:	In Words: Pesos: In Figures:
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AMOUNT IN WORDS: ______

AMOUNT IN FIGURE:

Submitted By

Date: _____

Name & Signature of Bidder's Representative

Position

Name of Firm

Address